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ABSTRACT

LaGuardia Community College (New York), with support from a contract with the U.S. Office of Career Education, has developed and assessed a career education model for two-year colleges. From July 1, 1976, through September 30, 1977, LaGuardia designed, or refined, and pilot-tested career educational components that included a career resource center, work experiences, career education infusion into curricula, career simulation activities, and career advisement. Following are some of the findings based on the evaluation surveys: (1) student ratings of the career resource center, career advisement, and career simulation were consistently positive; (2) students enrolled in a redesigned Data Processing Introductory course and work experience sequence viewed the infusion attempt as a successful one, however time limitations imposed on the career education-infused Philosophy course made that experience less positive in the students' ratings; (3) the work internship program was positively judged by both interns and employers; and (4) the effective reality test in the workplace of the classroom-taught skills and concepts was seen as a prime outcome of LaGuardia's career education program. Twelve recommendations concerning implementation of career education were also presented, based on the pilot-test data. (A companion document, CE 019 282 contains a detailed description of the project objectives and activities.) (BM)

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LaGuardia Community College

A MODEL FOR A COMPREHESIVE CAREER EDUCATIONAL APPROACH TO HIGHER LEARNING

Evaluation Report
(Volume III of Final Report)

Prepared for

The Office of Career Education
United States Office of Education

Contract Number 300760329

September, 1977

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U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

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VOLUME III

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I. EVALUATION OVERVIEW

A. Introduction

LaGuardia Community College, with support from a contract with the U.S. Office of Career Education, has developed and assessed a career education model for two-year colleges. From July 1, 1976 through September 30, 1977, LaGuardia designed, or refined, and pilot-tested career educational components that included a Career Resource Center, work experiences, career education infusion into curricula, career simulation activities and career advisement.

The purpose of this report is to present preliminary data-based findings with respect to the effectiveness of the various career education activities and services implemented under this federal contract. It is intended to offer community college policy-makers and practioners throughout the country an insight into what LaGuardia's faculty and staff have learned about implementing a comprehensive career education program.

It should be noted that LaGuardia viewed the fifteen-month contract period as a developmental one. Prior to the onset of the contract LaGuardia already had in place various aspects of a career education model; however, many of those programmatic pieces had to be modified to accomodate a more integrated effort. In attempting to expand and better articulate career education programs and services, considerable staff time was devoted to program redevelopment as well as pilot-testing.

This overview section is designed to efficiently present the initial findings and ensuing recommendations of the LaGuardia 1976-77 project. Detailed tables and narratives -"ministudies"- are included in the second, or "back-up," section. It is hoped that this reporting format will avoid the fate of all too many evaluation volumes -- they gather more dust than readers.

This report should be read in tandem with LaGuardia's extensive Final Report, which describes in detail the objectives of the project, its developmental history,

data-based findings and recommendations.* It is in that volume that policy-makers and practioners can find the "how-to's" of career education at the community college level.

B. The Population

In the 1976-77 academic year, LaGuardia enrolled 4540 students in credit-bearing programs. Of this total, 3013 attended full-time and 1527 enrolled part-time. In addition, 1247 students were enrolled in non-credit programs.

Several characteristics distinguish LaGuardia students from the average community college population. They are generally younger than the national norm, are recent high school graduates and have fairly low secondary school averages. Fifty-eight percent of the 1976 freshmen class were between the ages of sixteen and eighteen. Another eighteen percent were between the ages of nineteen and twenty-one. Almost half of this class attained a high school average below 75 percent, while another quarter of the class had averages below 79 percent.

The population was ethnically mixed: 41 percent of the student body are White, 28 percent Black, 24 percent Hispanic, 2 percent Oriental and 5 percent other.

Most of the students' families are "blue collar," with a median income of between $8,000 and $10,000. Parents' education averages high school or less, but they place a high degree of importance on their children's education.

Almost all students receive financial aid. This assistance, plus support from parents and work internship salaries, constitute students' major sources of income while in college.

C. Findings

1. Career Resource Center

The Career Resource Center, an integrating component of LaGuardia's model, has served as the locus of career exploration on campus. Many of the College's

*While this volume presents data-based findings, the Final Report, per se, presents the process-oriented findings throughout the project.

career educational programs and services referred their clients to the CRC in order to expand their career search through written, computer-based or verbally transmitted information.

About 75% of the CRC users were directly referred to the facility by one or more career educational programs. Only about 25% were "walk-in" clientele. Liberal Arts students were more frequent CRC users than their numbers within the student body would have indicated. Counselors and cooperative education faculty were more frequent referral sources than were classroom faculty. The latter group accounted for only about one referral out of ten.

Users of the CRC tended to be more interested in obtaining career information for personal planning purposes than for completing required course assignments, but about one in five users were interested in using the information for both purposes. (It should be noted that required Freshmen Advisory -- orientation - groups and cooperative education seminars encourage their students to actively plan for their careers and provide guidance to the students engaging in this process.)

Anonymous questionnaires administered to CRC clients found that better than nine out of ten users viewed the CRC career exploration activity (i.e., learning how to use the facility, reading relevant information, interacting with the occupational-search computer) as either "very useful" or "somewhat useful." This user-satisfaction rate was consistent whether the users were referred to the CRC through their freshmen advisory hours, cooperative education preparation courses or cooperative education seminars.

The CRC staff -- comprised of trained peer counselors, supervised by a recent LaGuardia graduate -- were similarly positively appraised by CRC users. (See Pages for the complete study of the CRC.)

2. Career Advisement

The student's initial contact with the career exploration process occurs in the required Freshmen Advisory Hour. Working with a group of between 20 and 30

fellow students of the same academic major, and with an advisement team composed of a counselor, a cooperative education coordinator and a faculty advisor, the student begins to consider career and educational options. A "Student Guide to Career Planning at LaGuardia," a career exploration workbook, was pilot tested in the Advisory Hours.

Through anonymous evaluation forms, more than 80% reported that their counselor -- the key individual in the early career exploration phase -- had a "moderate," or "a great deal" of career information to present and that their working with the counselor to choose and evaluate career goals was "very," or "somewhat helpful." In a related set of items, more than 80% of the respondants found that their guided curriculum planning was "very helpful" or "somewhat helpful."

It was also found that abount 20% of the freshmen did not engage in extensive career exploration in the initial segment of their college career. This figure reflects the proporation of entering students, whose basic academic skills are so poor, that their Freshmen Advisory meetings are devoted almost exclusively to matters of college survival. For this group, systematic career exploration is postposed until they have successfully adapted to the college environment. (See Pages 20-22 for the complete study of Career Advisement.)

3. Career Simulation

The concept of career simulation at LaGuardia evolved into hands-on activities in decentralized, already existing laboratories and facilities. These experiential opportunities were designed to introduce career-undecided students to several career areas, stimulate their interest in acquiring further career information and aid the students in further sharpening their areas of interest and ability.

Stimulation activities, called "Career Samples," were developed in four areas: Data Processing, Occupational Therapy, Child Care and Mental Health. A Freshmen Advisory Group of Liberal Arts majors served as the subjects in the Career Sample's pilot-test.

Students generally found the career sampling to be an interesting experience, with the activities that were the most "hands-on" in nature receiving the most positive evaluations. Similarly, the greater the extent of hands-on activities (vs. passively viewing a film or observing someone else perform occupationally-related tasks), the more the students reported they had learned about a given occupational field.

(It should be noted that in addition to the Career Sample approach, LaGuardia students receive extensive reality-based exploratory opportunities through the Cooperative Education program.) (See Page 23 for the complete study of Career Samples.)

4. Career Education Infusion into the Introductory Courses of All Disciplines

Career Educational infusion in academic courses takes a variety of forms at LaGuardia. The Teaching-Application-Reinforcement (TAR) strategy provides students with the opportunity to apply concepts and skills -- initially learned in the classroom -- during their work internships. Another infusion modality is the pairing of a Freshmen Advisory Hour with an Introductory Social Science course in order to relate student personal and career concerns to the subject matter of the Social Science discipline.

The TAR strategy was piloted in four areas during the contract year, but systematically evaluated in only two of them: Data Processing and a Philosophy course, "Freedom: Its Relationship to Work and Leisure." (In this, the pilot-stage of TAR, it wasthought that an evaluation of one career course, and one Liberal Arts course would provide preliminary evidence as to whether the TAR approach is a viable infusion strategy.)

Responses to a questionnaire from students enrolled in the Data Processing TAR course were compared with those of students in a traditional, i.e., non-TARred Data Processing course. Students in the TAR mode preceive that they learned more about jobs available in the field, developed a greater awareness of Data Processing job responsibilities, and acquired a higher degree of knowledge about training requirements, than did their counterparts in the non-TARred course. On the other

hand, more abstract issues, such as the need for writing skills to succeed in Data Processing, were difficult to transmit through the TAR mode, but were still learned more effectively than through the non-TAR format.

The experience with the Philosophy course was less positive. On the one hand, about two-thirds of the students -- all of whom were evening session working adults -- found that the application of freedom issues to work and leisure was valuable, but lower percentages felt that the course had more clearly defined their own thought on the nature of freedom (54.6%), or that the course had helped them to clarify their concept of work (50%), or that the course helped them clarify the nature of leisure (36.4%).

The one-quarter time span of the course, and the need to devote more class time to the concept of freedom before students were able to apply this knowledge to everyday situations were offered as an explanation for the course's mixed reviews.

The experimental pairing of an Introductory Social Science course with a Freshmen Advisory Program was designed to relate Social Science concepts to student career exploration and academic planning. The two components were team-taught by a Social Science faculty member and a Student Services counselor.

The paired courses were rated by 86.4% of the students as a help to them in planning their futures, and 81.8% considered the research and problem solving skills they learned as helpful to their career pursuits. The students (81.8%) particularly like the continuous presence of their counselor in the Social Science class. The students felt that this provided them with greater opportunities to interact with their counselor.

5. Cooperative Education Internships

Three three-month work experiences are required of all full-time, day session LaGuardia students, both career and Liberal Arts majors. The cooperative education program is optional for the evening, working population, which may use their current jobs as the educational basis for credit-bearing internships.

The effectiveness of the cooperative education program was assessed in two ways: employers were asked to rate LaGuardia interns and graduates (former interns) on a number of job-attitude and performance variables, and interns were asked to assess the extent to which the cooperative education internship seminars (designed to guide the learning at the work place) were valuable in meeting their intended objectives.

Thirty-four employers of the 300 who employ LaGuardia interns were interviewed and asked to complete a questionnaire that contained 19 items designed to reflect employer attitudes about career education and the company's participation in it.

A majority of these organizations' respondants did not concur with the often heard charge that cooperative education programs result in a continual turnover of employees, causing personnel problems. Nor did the employers feel that such programs were too costly in terms of finanacial outlay and supervisory time.

Employers ranked LaGuardia graduates significantly higher than entry level employees in work-related attributes, such as cooperativeness, willingness to learn and ability to follow instructions. These characteristics are commonly included on standard employee rating scales.

During 76-77, 773 students (180 Liberal Arts majors and 593 Career majors) anonymously rated their internship seminars on a number of significant factors, all concerned with their effectiveness in meeting their respective intended objectives. The three most significant results of this study were:

1. Approximately 78% of the students rated the seminars as either "extremely" or "very" valuable in meeting their career educational objectives;

2. Liberal Arts majors regarded the seminars as equally valuable to them as did the career majors;

3. Seminars taught by industrial representatives were rated equally effective to those taught by LaGuardia's professional staff.

D. Recommendations

In its Final Report to the Office of Career Education, LaGuardia has offered more than 40 policy and programmatic recommendations concerning the implementation

of career education at the two year college. The reader is referred to that volume for a complete listing of LaGuardia's suggestions.

It would be useful, however, for this Evaluation Overview, to delineate those recommendations that relate specifically to the findings reported here. These suggestions are categorized by program component.

1. Career Resource Center

(a) The placement of a computer-assisted career information retrieval system within the CRC does not necessarily provide a "higher level" of data, but does serve to engage students who otherwise migh might not be drawn to the more print-based media.

(b) Staffing of the CRC with carefully selected and supervised para-professional career planning aides, who, themselves, are recent two-year college graduates, capitalizes on the counseling gains associated with peer intervention; the aides are viewed by student users of the CRC as models and as credible sources of information.

(c) Users of the CRC must be recruited in an active outreach program; organized, and in many cases, required courses successfully bring students to the CRC. To rely primarily on walk-in clientele, would result in an underutilized facility.

2. Career Assessment

A carefully constructed student user guide ensures that CRC visits are coordinated with other career development offerings on campus, that CRC users are prepared in advance for CRC activities, and that CRC use and follow-up are tailored to the career development needs of the users.

3. Career Simulation

Career simulation can be accomplished economicially in existing college laboratories or facilities; simulation -- LaGuardia's approach is referred to as "career samples" -- is particularly suited to the career-undecided student and serves to introduce him/her to a major career cluster and stimulates further

information search. (The Cooperative Education Internships provide a more extensive reality-test of career options for the career-undecided student.)

4. Career Education Infusion

(a) Through the TAR approach, a Cooperative Education program can become an effective vehicle for reality-testing career educational concepts taught on campus.

(b) Through the TAR approach, the concepts of most Liberal Arts courses and disciplines can be perceived by the student as having applicability to the work setting. Too often, cooperative education programs have overlooked completely the learning potential present in the work setting, concentrating exclusively on the job tasks. Regarding the work setting as a "slice of life" in this manner, makes cooperative education an extremely valuable and compatible experience for Liberal Arts majors.

(c) The programmatic concept of "pairing" two apparently unrelated courses in stepwise coordination, with the teachers of each participating in the other's classes offers potential for demonstrating the broad application of course content; pairing permits faculty to increase their appreciation of the relevance of other disciplines.

5. Cooperative Education Internships

(a) Cooperative Education programs have potential value for all students (Liberal Arts and Career) for reality-testing both career choices and the concepts and skills learned in the classroom.

(b) Career-development seminars can serve to ensure that the work experience is being optimally analyzed by students seeking improved career-skills or updated career information.

(c) Employers should be attracted to participate in the Cooperative Education Program on the basis of economic arguments; e.g., current interns, who are trained by an organization, can immediately become effective full-

time employees upon graduation.

(c) The work experience should not be utilized solely as a "job," or "O.J.T." Other significant career educational objectives (e.g., clarifying work values, assessing the applicability of academic concepts to the work setting, etc.) can be attained through the internship, in addition to that of practicing the technical skills of a given occupation.

(d) Properly oriented industrial representatives make effective career educational instructors; apparently their motivation compensates for their lack of formal classroom training.

E. Summary

This Evaluation Overview reported preliminary data-based findings concerning a number of LaGuardia's career educational efforts piloted during the 1976-77 contract period.

Student ratings of the Career Resource Center, career advisement and career simulation were consitently positive. Students enrolled in a redesigned Data Processing Introductory course and work experience sequence viewed the infusion attempt as a successful one; on the other hand, time limitations imposed on the career educationally infused Philosophy course made that experience less positive in the students' eyes. Team teaching a freshmen orientation and Introduction to Social Science course was rated positively by students who learned the relationship between the concepts of the discipline and the personal and career concerns of their college orientation activities. The work internship program was positively judged by both interns and employers. The effective reality-test in the workplace of the classroom-taught skills and concepts was seen as a prime outcome of LaGuardia's career education program.

This Evaluation Overview concluded with 12 recommendations concerning the implementation of career education that were primarily drawn from the pilot-test data reported herein.

II. SPECIFIC STUDIES CORRESPONDING TO MAJOR CONTRACT OBJECTIVES

A. Career Resource Center

1. Introduction

LaGuardia Community College has maintained a Career Advisory Center since the college first opened in 1971. Under its contract with the Office of Career Education, the College sought to integrate and strengthen its career education efforts through an increased and more systematic use of an expanded Career Resource Center. Extensive planning efforts by the four divisions of the College (Instruction, Student Services, Cooperative Education, and Continuing Education) ensured that students were exposed to the Career Resource Center in an organized manner. During three phases of their college careers, initial-entry, pre-internship and the second (of three) internship, students are oriented to the CRC and the ways in which it can assist them in achieving their career goals. Students are encouraged to return individually to consult with the CRC staff in working toward those goals.

On an ongoing basis, individual students and class groups visiting the CRC are asked to complete evaluations of the Center. Groups are asked to evaluate the orientation presentation made, whether it provided them with more information on available resources and if they planned to return to the CRC. Additional data are sought for individual users: "major," referral source and type of information desired. Students are then asked to evaluate the extent to which they are satisfied with the CRC. Sample data were taken from student responses for the month of April, 1977.

2. Findings

a. Overall

Both group and individual user responses to the CRC were strongly positive. Groups rated most positively the orientation presentations made and an extrordinarily high percentage of students said they planned to return to the Center. Individual users were satisfied with the resources available, whether print- or computer-generated information, or assistance from the CRC staff, themselves.

b. Advisory Hours

Advisory Hour sessions are required of all students in their first quarter of attendance at LaGuardia. The purpose of these meetings is to orient students to the College and to assist them in career exploration. During this period, students are required to complete the "Guide to Successful Career Planning." In their evaluation of the Center, students are asked if they were aware of its existance and if they had used it previously. Twenty-five percent of the students said they had been aware of the Center, but for 97% of the respondees, the Advisory Hour orientation was their first visit to it. These data suggest that it is advisable to pursue an organized effort to expose students to resources such as the CRC "from Day 1 on" to ensure not only their awareness of it, but their early utilization of it. Such a program increases the likelihood that students will return individually: 92% of the Advisory Hour students said they would return, while 8% said they were not sure.

The high percentage of students indicating that they would return corresponds to the favorable ratings given to the CRC staff orientation presentation. Ninety-four percent of the students rated this presentation as "very useful" or "somewhat useful."

c. "Coop Prep"

The CRC presentation for students preparing for their first internship was given a similarly high rating. Ninety-nine percent of the students in "Coop Prep" classes cited the presentation as "very useful" or "somewhat useful." When asked if the orientation presentation made them more aware of available career and educational resources, 93% responded affirmatively. That the orientation was successful is indicted by the fact that 91% of the Coop Prep students said they would subsequently return individually to the Center.

d. Cooperative Education Internship Seminars

Use of the CRC is a major component of the seminar taken in conjunction with student's second internship. The seminar is designed to assist students in exploring job opportunities within selected career fields. The CRC presentation corresponding

to the seminar theme was rated as "very useful" or "somewhat useful" by 100% of the students. As a result of the presentation, 93% of the student's said they were more aware of the career and education resources available at the Center, and 97% said they would definitely return.

e. Individual Career Resource Center Users

A profile was drawn of individual CRC users in all major areas of study at the College. This total was then categorized into Liberal Arts majors and all other majors. Of the one-month sample taken of individual CRC users, Liberal Arts majors comprised over 40% of all CRC users. One quarter of all CRC users were referred to the Center by Student Services counselors. In the Liberal Arts category, 34% were referred by counselors, while 18.3% of all other majors were similarly referred. Cooperative Education faculty referred 29.8% of all users. Of all Liberal Arts students, 38.6% were referred by Coop faculty as were 23.3% of all other majors. Academic faculty referred the smallest percentage of students: 10.6%. Only 2.3% of all Liberal Arts majors and 16.7% of all other majors were referred by the teaching staff. The remaining students came to the CRC as walk-ins, were referred by a friend or saw an ad for the Center.

CRC users far more frequently sought information for personal use (65.8%) than to complete a class assignment (18.5%). However, 15.7% came for both personal and academic reasons. The information 65.7% were seeking pertained to careers rather than education. Nineteen percent sought both types of information and 15.2% sought only educational information.

User satisfaction was extremely high. Over 98% of all majors indicated that they were satisfied with the career and educational resources available at the CRC. Of the 38 persons using the computer terminal during this period, 97.8% felt that it was "very useful" or "somewhat useful" in providing career and educational information. The CRC staff was highly praised as well. Ninety-five percent of the student indicated that the staff was "very helpful" and 5% said they were "somewhat helpful."

3. Conclusions

Organized efforts to ensure student awareness and use of the Career Resource Center have been highly successful. CRC orientation, built into the College's career education programs, has proven to be a useful approach to student recruitment. Orientation presentations, integrated with other program components and geared to student needs at various phases of their college careers, have been an important factor in generating CRC use.

In addition, individual CRC users are satisfied with the resources, including the staff at the Center. In only one instance, the referral of students by instructional faculty, has the implementation of the CRC concept fallen short of its anticipated goals. However, developments made possible through LaGuardia's OCE contract, have enabled the Colllege to plan for better use of instructional faculty in the career education process. As a result of the Liberal Arts Task Force recommendations, L.A. faculty will increase their participation in student academic advisement. Faculty will thus be in more personal contact with students than is presently possible and will be in the position to make appropriate referrals. The "Faculty Guide to Career Education" has been distributed to faculty and will be emphasized during the College s professional development week. The "Guide" serves as a general introduction for instructors in ways in which career education can be infused into the classroom. Finally, the TAR model, from which introductory courses in each of the college's major areas of study were redesigned during the current contract year, will be implemented in the 1977-78 academic year. All faculty will be trained in and will eventually teach the TAR model introductory courses, which require their familiarity with the CRC as a resource in teaching TAR assignments.

4. Data: Results of Career Resource Center User Surveys

a. Group: Advisory Hours (N=52)

Was this your first visit to the CRC?	YES 94%		NO 6%	
Did you know about the CRC prior to group visit?	YES 25%		NO 75%	
Are you now more aware of CRC resources available?	YES 86%		NO 14%	Not Sure 8%
How would you evaluate the CRC presentation?	VERY USEFUL 80%	SOMEWHAT USEFUL 14%	NOT VERY USEFUL 6%	NOT USEFUL 0%

b. Group: Coop Prep (N=102)

Evaluation of Presentation	VERY USEFUL 79%	SOMEWHAT USEFUL 20%	NOT VERY USEFUL 1%	NOT USEFUL 0%
More aware of resources available	YES 93%		NO 7%	
Will you return to CRC?	YES 91%		NO 0%	NOT SURE 9%

c. Group: Internship Seminar (N=32)

Evaluation of Presentation	VERY USEFUL 75%	SOMEWHAT USEFUL 25%	NOT VERY USEFUL 0%	NOT USEFUL 0%
More aware of resources available	YES 93%		NO 7%	
Will you return to CRC?	YES 97%		NO 0%	NOT SURE 3%

d. Group: Individual Users (N=104)

1. CRC REFERRAL SOURCE

	TOTAL STUDENTS N=104	LIBERAL ARTS STUDENTS N=44	ALL OTHER STUDENTS N=60
COUNSELOR	25.0	34.0	18.3
COOP FACULTY	29.8	38.6	23.3
INSTRUCTOR	10.6	2.3	16.7
WALK-IN	10.6	11.4	10.0
POSTER/AD	5.8	4.6	6.7
FRIEND	10.6	6.8	13.3
SEMINAR	3.8	.0	6.7
OTHER	3.8	2.3	5.0

2. Purpose of CRC Visit (N=108)

	TOTAL STUDENTS N=108	LIBERAL ARTS STUDENTS N=48	ALL OTHER STUDENTS N=60
INFORMATION FOR PERSONAL USE	64.8	64.6	66.7
CLASS ASSIGNMENT	18.5	18.8	18.3
BOTH PERSONAL INFORMATION AND CLASS ASSIGNMENT	15.7	16.6	15.0

3. Information Sought (N=105)

	TOTAL STUDENTS N=105	LIBERAL ARTS STUDENTS N=48	ALL OTHER STUDENTS N=57
CAREER	65.7	64.6	66.7
EDUCATION	15.3	16.6	14.0
CAREER & EDUCATION	19.0	18.8	19.3

4. Evaluation of Career Information Resource (N=87)

	TOTAL STUDENTS N-87	LIBERAL ARTS STUDENTS N-39	ALL OTHER STUDENTS N=48
VERY USEFUL	78.2	71.8	83.3
SOMEWHAT USEFUL	20.6	25.6	16.7
NOT USEFUL	1.2	2.6	.0

5. Evaluation of Education Information Resources (N=55)

	TOTAL STUDENTS N=55	LIBERAL ARTS STUDENTS N=25	ALL OTHER STUDENTS N-30
VERY USEFUL	80.0	72.0	86.7
SOMEWHAT USEFUL	18.2	24.0	13.3
NOT USEFUL	1.8	6.0	.0

6. Evaluation of Computer Resources (N=38)

	TOTAL STUDENTS N=38	LIBERAL ARTS STUDENTS N=19	ALL OTHER STUDENTS N=19
VERY USEFUL	84.2	84.2	84.2
SOMEWHAT USEFUL	13.6	10.5	15.8
NOT USEFUL	2.2	5.3	.0

7. Evaluation of CRC Staff (N=79)

	TOTAL STUDENTS N=79	LIBERAL ARTS STUDENTS N=38	ALL OTHER STUDENTS N=41
VERY HELPFUL	95.0	94.7	95.1
SOMEWHAT HELPFUL	5.0	5.3	4.9
NOT HELPFUL	.0	.0	.0

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5. Questionnaires Which Yielded Tabular Data

GROUP EVALUATION RESPONSE QUESTIONNAIRE

Date_____

Dear Friend:

Kindly take a minute to fill out this form. Your response will help us to provide the best possible presentation for future visitors to the Career Resource Center. Thanks for your help!

Please CIRCLE the appropriate response:

1. Your "major" area:

Accounting Data Processing Liberal Arts Occupational Therapy

Business Secretarial Science Human Services Educational Associate

Health Managment Other

---

2. Are you here for: Coop Prep Advisory Hour Other

Internship Seminar Subject Class

---

3. Is this your first visit to the CRC? YES NO

Did you know abut the CRC prior to coming with this group? YES NO

---

4. How would you rate the presentation?

Very Useful Somewhat Useful Not Very Useful Not Useful At All

---

5. Are you now more aware of the available career and education resources than you were prior to this session? YES NO

---

6. Will you return to the Career Resource Center?

Yes, to complete an assignment. Yes, to research info for personal use.

Not sure. No.

---

7. COMMENTS:

LAGUARDIA COMMUNITY COLLEGE
CAREER RESOURCE CENTER
EVALUATION RESPONSE

Date_____

Dear Friend,

Kindly take a minute to fill out this form. Your response will help us to provide the best possible assistance to future users of the Career Resource Center. Thanks for your help!

Please CIRCLE the best response to these questions:

1. Status at Guardia:..... Day Student Middle College Graduate Staff
Extended Day Student Faculty Visitor

a. "student" major:..... Accounting Data Processing Human Services Ed. Assoc.
Occup. Therapy Business Liberal Arts Sec. Science
Health Mgmt. Other

b. Number of quarters in attendance:..... 1 2 3 4 5 6 7 8 8+

---

2. Is this your first individual exposure to the C.R.C.?..... Yes No

How did you learn about the CRC?..Counselor Coop. Faculty Walked-in Poster/Ad
Instructor Friend Seminar Visit Other

---

3. Are you here to:..... a. research information for personal use
b. complete class assignment

a. If "assignment completion", for what class?..... advisory hour coop. prep. internship seminar
subject class

---

4. What type of information are you seeking?..... Career Educational

a. "Career Information" type:..... job description
job responsibilities
employment outlook
educational requirements for job
other_____

b. "Career Information" resources used:

SOURCES	RATING			
Dictionary of Occupational Titles.....	very useful	somewhat useful	not useful	not used
Occupational Outlook Handbook.....	very useful	somewhat useful	not useful	not used
Encyclopedia of Careers.....	very useful	somewhat useful	not useful	not used
CATALYST series.....	very useful	somewhat useful	not useful	not used
Occupational Briefs.....	very useful	somewhat useful	not useful	not used
Periodicals.....	very useful	somewhat useful	not useful	not used
General Textbooks.....	very useful	somewhat useful	not useful	not used
Career Files.....	very useful	somewhat useful	not useful	not used

**********PLEASE TURN OVER**********

SOURCES	RATING			
Computer Information.....	very useful	somewhat useful	not useful	not used
C.R.C. Staff.....	very useful	somewhat useful	not useful	not used
Other_____	very useful	somewhat useful	not useful	not used

c. "education information" type:..... transfer requirements

4 yr. schools with your desired major

2 yr. schools with your desired major

available courses/training at other institutions

other_____

d. "education information" resources used:

College catalogs.....	very useful	somewhat useful	not useful	not used
Guide to College Majors.....	very useful	somewhat useful	not useful	not used
Professional Association Listings.....	very useful	somewhat useful	not useful	not used
General C.R.C. education data	very useful	somewhat useful	not useful	not used
C.R.C. Staff.....	very useful	somewhat useful	not useful	not used
Computer Information.....	very useful	somewhat useful	not useful	not used
Other_____	very useful	somewhat useful	not useful	not used

5. Have you used the Computer terminal?..... Yes No

Do you plan to use it:..... Again First time Never

Computer information sought:

Careers.....	very useful	somewhat useful	not useful	not used
4 yr. colleges.....	very useful	somewhat useful	not useful	not used
2 yr. colleges.....	very useful	somewhat useful	not useful	not used

6. The C.R.C. staff is: ..... very helpful somewhat helpful not helpful not used

Will you discuss your visit to the C.R.C. with anyone?.....Yes No
(e.g. Your counselor, coop. coordinator, instructor, etc.)

Will you follow-up leads, write for more information, or try other resources, as suggested by C.R.C. staff?.....	Yes	No	Not Sure	Doesn't Apply

7. The best part of the C.R.C. is:

8. The C.R.C. should improve:

9. The C.R.C. should add:

B. Career Advisement User Surveys

1. Introduction

For LaGuardia students, the process of career advisement and exploration begins in Freshmen Advisory Hours. These sessions introduce students to the college resources available to them in planning and pursuing their curriculum and future career goals. The "Student Guide to Career Planning at LaGuardia," developed during the OCE contract year, provides a vehicle for students to analyze their skills, interests and preferred life styles in a group setting. With the assistance of an advisory team, led by a Student Services counselor, students begin a self assessment designed to help them make informed decisions on potential career choices. The "Student Guide" is then completed in the Career Resource Center with the assistance of the CRC staff.

Students were asked to evaluate the extent to which their counselor and other members of the Advisement Team assisted them in career exploration and planning. They rated the degree to which counselors were knowledgeable about college resources as well as their familiarity with jobs and careers. Students also evaluated the assistance given in choosing career goals and in education programming.

2. Findings

An overshelming majority of students were satisfied with the career advisement they received.

Regarding jobs and careers, 88.3% of the students felt that their counselors had a "great deal" to a "moderate" amount of information. This positive evaluation decreased slightly with regard to assistance in choosing and evaluating career goals; 76.5% stated that their counselors were "very" to "somewhat" helpful. This lower percentage was not unexpected, since a number of students emerge from the initial career exploration process still undecided about their career goals. A greater proportion of students, 84.7%, felt that their counselors had a "great deal" to a "moderate" amount of information about college resources (including referral to

career information resources). Finally, 82.6% of the students felt that their counselors were "very helpful" or "somewhat helpful" in planning their curriculum.

Many of the remaining students, rather than responding negatively to the above questions, gave neutral answers. When asked about jobs and careers, 8.8% said they had never discussed it with their counselors. Thirteen percent did not know whether their counselors had information on college resources. In choosing and evaluating career goals, 21.6% said they have never discussed their choices with their counselors. To some extent, this represents the responses of basic skills transitional students with whom career exploration is deemphasized in favor of learning basic college "survival skills." The 14.8% of students who have never discussed their educational program with their counselors encompass those students who have made a firm career choice (usually in more technical or business areas) and those students whose majors have a fairly prescribed curriculum.

3. Conclusions

The Freshmen Advisory Hours, designed to assist students in their career exploration, have been highly successful. Almost all students who have attended these sessions and have sought out their counselors and other college resources have been satisfied with the assistance given them. The percentage of students who have not availed themselves of these services exceeds those who were dissatisfied. Through the streamlining of the referral system, the hiring of more Student Service counselors and the increased involvement of Liberal Arts faculty in the career advisement process, the College intends to make every effort to reach those students who have had minimal contact with the career advisement process.

4. Data: Evaluation of Career Advisement

1. Regarding jobs and careers, my counselor has:	N = 1061
A GREAT DEAL OF INFORMATION	51.5%
A MODERATE AMOUNT OF INFORMATION	36.8%
HARDLY ANY INFORMATION	2.9%
NEVER DISCUSSED	8.8%
2. In helping me choose and evaluate my career goals, my counselor is:	N = 1057
VERY HELPFUL	51.1%
SOMEWHAT HELPFUL	25.4%
HARDLY HELPFUL AT ALL	1.9%
NEVER DISCUSSED	21.6%
3. In planning my education program, my counselor is:	N = 1062
VERY HELPFUL	61.9%
SOMEWHAT HELPFUL	20.7%
HARDLY HELPFUL AT ALL	2.6%
NEVER DISCUSSED	14.8%
4. Regarding resource people and offices at the college, my counselor has:	N = 1079
A GREAT DEAL OF INFORMATION	52.5%
A MODERATE AMOUNT OF INFORMATION	32.2%
HARDLY ANY INFORMATION	2.3%
I DON'T KNOW	13.0%

C. The Career Sample

1. Introduction

LaGuardia freshmen participated in the pilot testing of a series of one hour career simulation modules during the Spring academic quarter (3/77 - 6/77) Advisory Hour sessions. The objective of these "career samples" was to assist students who were undecided about their college majors and future work in their career exploration. It was thought that a structured simulation activity would provide a sufficient information base for students to make preliminary decisions regarding the value of continued career exploration in selected fields. Those who wished to further research one (or more) of the "career sample" fields were referred to a variety of resources, including counselors, instructional faculty, cooperative education coordinators and the Career Resource Center. They would ultimately test their potential career choices on their cooperative education internships.

After each of the four career samples was presented, students completed an evaluation survey. They rated the degree of interest of the presentation, the amount learned from participating in the experience and its usefulness as a source of career information. Further, they were asked if they knew more about the activity than they did before participating in it and whether they would recommend it to other students. Finally, students were asked to describe those aspects of the simulation module they liked most and least.

2. Findings

Generally, the evaluation results were positive, varying slightly with the topic and the nature of the presentation. Students gave higher ratings to career samples which required them to actively participate rather than passively react. The evaluation of one module, Data Processing, is not included in the general presentation, since the sample was too small. Data from the remaining three modules, Occupational Therapy, Child Care and Mental Health, are presented in Table(s)

a. Interest Level of Activity

In each career sample session, a representative of the field discussed the nature of the job and the worker skills and interests associated with it. This was followed by student participation in a selected activity related to the field. Students generally rated the modules as having a high degree of interest. The Child Care presentation was rated by 84.6% of the students as "extremely" or "quite" interesting, while the Occupational Therapy simulation received a 77.8% rating and Mental Health a 71% favorable rating in the same interest categories. The nature of the activities in which the students participated may have contributed to the variation in ratings. During the child care simulation, students viewed and discussed a film, but were also asked to construct children's play activities and toys using simple kitchen utensils and foods. The Occupational Therapy presentation required students to role play handicapped persons and therapists using various prosthetic devices and to construct craft objects while discussing the role of art therapy in patient rehabilitation. The mental health module, in contrast, presented three short films which formed the basis for a discussion of the mental health worker's role and the kinds of clients likely to be encountered. Based on the evaluation data, students gave higher interest level ratings to those simulations which combined general discussion with specific job related tasks.

b. Amount Learned from the Activity

The Child Care and Occupational Therapy simulations received similar ratings on the amount learned through participation in the activity. A "great deal" or "quite a bit" was learned by 69.2% of the students from the Child Care simulation, while 66.6% of the students gave a similar rating to the Occupational Therapy presentation. Only 39.1% gave a similarly positive rating to the Mental Health simulation. It is possible that the film and the discussions alone did not sufficiently contribute to student feelings of having learned from the experience. Perhaps the psychological concepts and the activities performed by the mental health worker are too broad to be considered in a one hour simulation module.

Regardless of the degree to which students felt learning took place, 84.6% said that they knew more about child care work after having participated in the simulation, and 94.4% agreed that they knew more about Occupational Therapy. However, only 46.1% felt that they increased their knowledge of the mental health field.

c. Helpfulness of Activity as a Source of Career Information

Rated by 83.3% of students as "extremely helpful" or "quite helpful" as a source of career information, the Occupational Therapy simulation ranked well above Child Care (61.5%) and Mental Health (47.8%). One possible explanation for this discrepancy is that the educational requirements, job tasks and career opportunities are far more structured for Occupational Therapists than they are for Child Care and Mental Health workers.

d. Activity Recommended for Other Students

Most students stated that they would recommend the simulations to other students. The Occupational Therapy module was recommended by 87.5% of the students and the Child Care by 84.6%. The remaining students were "not sure" that they would so recommend. Seventy percent of the students said they would recommend the Mental Health module. Perhaps these students thought that the Mental Health module would be more valuable to others than it was to themselves. Twenty-five percent said they were not sure and only 5% said they would not recommend the Mental Health module.

3. Conclusions

Based on the positive response given to the simulation modules, they will be presented again in the next academic year using a larger sample of incoming freshmen who are undecided about a major. Each career sample will be carefully reviewed and modified, based on feedback from student participants. The Mental Health module, especially, will be reconstructed to include more active participation on the part of students. Worker skills and interests, educational requirements and job opportunities will be more precisely stated, so that students will have a better understanding of whether such a career would be suitable to them.

4. Data: The Career Sample (N = 13 to 24)

a. Interest Level of Activity

	EXTREMELY	QUITE	SOMEWHAT	BORING	VERY BORING
CHILD CARE WORKER	38.4%	46.2%	15.4%	0%	0%
OCCUPATIONAL THERAPIST	38.9%	38.9%	22.2%	0%	0%
MENTAL HEALTH WORKER	25.0%	46.0%	20.7%	8.2%	0%

b. Amount Learned from Activity

	GREAT DEAL	QUITE A BIT	FAIR AMOUNT	LITTLE	VERY LITTLE
CHILD CARE WORKER	30.8%	38.4%	30.8%	0%	0%
OCCUPATIONAL THERAPIST	33.3%	33.3%	27.9%	5.5%	0%
MENTAL HEALTH WORKER	17.4%	21.7%	47.8%	8.8%	0%

c. Helpfulness of Activity as a Source of Career Information

	EXTREMELY	QUITE	SOMEWHAT	NOT TOO HELPFUL	NOT HELPFUL
CHILD CARE WORKER	23.0%	38.5%	30.8%	7.7%	0%
OCCUPATIONAL THERAPIST	44.4%	38.9%	16.7%	0%	0%
MENTAL HEALTH WORKER	8.8%	39.0%	34.7%	17.4%	0%

d. Do you know more about this career now than you did before participating in the activity?

	YES	NO	NOT SURE
CHILD CARE WORKER	84.6%	15.4%	0%
OCCUPATIONAL THERAPIST	94.4%	0%	5.6%
MENTAL HEALTH WORKER	46.1%	25.0%	25.0%

e. Would you recommend this activity to other students?

	YES	NO	NOT SURE
CHILD CARE WORKER	84.6%	0%	15.4%
OCCUPATIONAL THERAPIST	87.5%	0%	12.5%
MENTAL HEALTH WORKER	70.0%	5.0%	25.0%

C. Analysis of the TAR Process in Data Processing*

1. Objectives of the TAR Model in Data Processing

The development of a "Teach-Apply-Reinforce" model began with an analysis of the learning problems Data Processing students face on their first internship. In general it was found that students have difficulties perceiving the importance of, and learning about three major areas: the functions of the data processing center in the larger organization; the necessity for interdisciplinary "survival skills," such as writing and math in addition to technical skills; and an understanding of the world of work, its values, pressures and satisfactions. Traditionally, Data Processing curricula have emphasized the technical details and rarely focused on these broader skill areas. An attempt was made here to introduce these concepts into the academic sequence so that students would begin their first internship with an understanding of the broader concerns.

In addition, it was discovered that students are often unprepared for the, at times, confusing conditions of their first D.P. internship. Their classroom and laboratory experiences always have been presented so that "learning" seems to take place in a structured environment. The world of work does not resemble the world of school, yet students have been expected to "learn" from both experiences. Students evidently lack an ability to observe and analyze the work situation. Apparently the traditional curriculum emphasized facts and knowledge, but failed to stress the process of learning.

A model was constructed to guide students in the transition from classroom to job by building their powers of observation and analysis. The ability to observe a situation (be it work or classroom), analyze its ramifications and report on the outcome, is central both to education and the data processing function.

In the Data Processing sequence, the TAR model has three course components: Introduction to Data Processing (usually taken in the first term); Coop Prep (taken before the first internship); and the first Seminar (taken at the same time

*Study conducted and report prepared by Professor Joan Greenbaum Cummings and Professor Meryl Sussman.

as the first internship). The curriculum in each component was modified to introduce the broader concepts in the classroom segments, and a Field Study Guide was designed to focus the students' attention on the processes of observation and analysis. The Guide is intended to integrate the three course components. Starting with the introductory course it sought to guide students in their observations of the data processing world around them.

2. Process Design to Evaluate the TAR Model

Last Fall, when instructors began teaching the TAR sequence, they developed a series of questionnaires for evaluating the success of the model. The forms sought to capture the students' perceptions of the TAR process:

(1) Did the students perceive that the TAR topics had been taught?

(2) If they perceived that the topics were introduced, how important did they feel these were relative to the other topics in the course?

(3) Did they feel that the topics were useful to them in understanding and planning their future studies and careers?

(4) At what point in the sequence of courses did the topics become important to them?

Three similar questionnaires were developed to be administered at the completion of each course in the sequence. The developmental team's original list of three broad problem areas was subdivided into seven topics:

- Jobs available in data processing
- Responsiblities of different positions in data processing
- Training and experience required for each position
- How math, accounting and writing skills are used in data processing
- How and why large organizations use data processing
- The pressures and demands on workers in data processing
- Understanding work values

The first six topics were introduced in varying degrees in the Introduction to Data Processing course; the last topic was introduced in the Coop Prep course. All

were to be reinformced in the Seminar. Since it was not possible to evaluate growth in the student skills of observation and analysis, it was felt that the questionnaires would serve to capture at least their perceptions of the learning outcomes.

The questionnaires were intended to pinpoint problem areas and enable the teachers to revise the course objectives. Although the developmental team sought to conduct only a "process" evaluation, a control group was formed in the Introductory D.P. course. The control group was exposed to the earlier curriculum.

3. Preliminary Evaluation Findings

a. Summary

At the time of this writing the majority of students have been through the first two courses in the sequence.* In general, the students' perceptions of the TAR process have been favorable. The overshelming majority of students perceived that the TAR topics had been in fact introduced in the curriculum and were generally useful. Again, as would be expected, students who were not exposed to the TAR Introduction to Data Processing course, had less awareness and interest in these topics.

Reviewing the students' responses to both the TAR and the non-TAR pre-existing topics, it was found that those TAR subjects which were emphasized by the instructors were perceived as important by the students. More importantly, the questionnaire's administration yielded information on the form's content.

Student feedback enabled the faculty to better plan curricular changes for the coming year, and have resulted in a closer alliance between the Field Study Guide and student needs. Surprisingly, student grades seemed to have littel relationship to student perceptions of the TAR process.

*A small group of students (9) have completed the sequence and their questionnaire results are included below, although it is too small a group on which to base an evaluation. The majority of the students will not complete the sequence until Fall '77.

b. Analysis by TAR Topic

(1) Awareness of the different jobs available in Data Processing

One hundred percent of the students in the TAR Introduction to Data Processing course felt that they had been exposed to this topic. Of the students in the control group 78% said that it had been considered; thus, pointing out a difference between the traditional curriculum and the TAR modifications.

Sixty percent of the TAR students said that an average or more than average amount of time was spent on the topic, which resembled the instructors' perceptions of the amount of class time devoted to this issue. Ninety percent of the students indicated that they found this topic very or extremely useful in planning their future studies and careers.

The responses to the Coop Prep course were similar: 100% perceived that the topic had been taught; 90% felt that at least an average amount of time was spent on it; and 90% indicated that it was useful to them. The increase in the time spent on this topic accurately reflected its emphasis in this second course in the sequence.

(2) Awareness of the Responsibilities of the Jobs in Data Processing

In the Introduction to Data Processing course, 70% of the TAR students recalled that this issue had been raised, compared to 59% of the non-TAR students. In the Coop Prep course 100% of the students recognized that this issue was discussed. The difference can be partly attributed to the added emphasis given this topic in the Prep course. In addition, it seems likely that the job-responsiblities issue was not appreciated by the students until they were further along in their D.P. studies.

The same split is evident when they were asked to indicate how useful they felt this topic was to them. Seventy percent of the Introduction to Data Processing students found it useful, and 100% of the students acknowledged its usefulness in the Coop Prep.

(3) Awareness of the Training Required in Data Processing

Ninety percent of the TAR students in Introduction to Data Processing perceived that this topic had been raised, compared to 54% of the non-TAR students. At the end of the second course, again, 100% of the students perceived that the issue had been discussed, and not surprisingly, 100% of them found that it was useful for their planning purposes. In the first course only 70% of the students had thought that knowledge of training requirements was useful to them.

(4) Awareness of the Need for Math, Accounting and Writing Skills

This topic posed the most difficulty for both the students and instructors. In the first course only 40% of the students perceived that it had been taught (with no difference between the TAR and non-TAR populations). At the end of the Coop course 72% of the students stated that the topic had been discussed. While this represents a marked improvement over the first set of responses, it is still far below the responses for the other topics.

In the Intro course only 20% 9f the students (TAR and non-TAR) found that the discussion of the need for related skills was at least moderately useful to them in their future planning. After completing Coop Prep, 63% of the students perceived its use.

From in instructional point of view, it was difficult to weave this topic into the traditional curriculum. In addition, this infusion was complicated by the fact that the majority of the students fear these "subjects" and had hoped that Data Processing would not involve these skills. The students' reluctance and the in-dtructors' difficulties call for additional curriculum development for better instilling an awareness of the value of these skills.

(5) How Organizations Use Data Processing

Eighty percent of the TAR students in the first course perceived that this had been discussed as opposed to 71% of the non-TAR students. In the second course, it was found that the percentage still involved only 80% of the students. This was also true for the students' perceptions of the topic's use to them. In both cases 60%

of the students found that it could be useful in planning their future. The only difference revealed was that while 70% of the students felt that at least an average amount of time had been spent on this topic in the second course, only 50% felt similarly about the first course.

This topic, too, requires further curriculum development. Since it is in fact a broad issue, an attempt will be made to subdivide it into several components. The vagueness of the concept was complicated by unclear wording on the questionnaire.

(6) Awareness of the Pressures and Demands on D.P. Workers

The introduction of this topic was particularly important because students tend to develop a glamorous image of the field. If the staff were to be at all successful in preparing students for the real world of work, the teachers would have to draw an accurate picture of the realities of the D.P. field.

At the end of the first course, 50% of the TAR students perceived that this "real" picture had been discussed, as opposed to 38% of the non-TAR students. By the end of the second course in the sequence, 100% of the students were aware that this topic had been infused in the course.

There was also a marked difference between the time spent on the topic during the two courses. In the Introduction to Data Processin course only 30% of the students felt that at least an average amount of time was spent on it, while 90% of the students found that time was spent on it during the second course. In part, this reflects the fact that the second course, by design, is more concerned with this topic. However, this difference is partly attributed to the students' deepening perceptions as they continue in their D.P. studies.

(7) Awareness of the Different Values Toward Work

This topic was introduced in the second course. Eighty percent of the students felt that it had been discussed, but only 49% indicated that it seemed useful to them.

It will be interesting to see if these results increase when the topic is reintroduced during the third course (Seminar). The relatively low level of favorable

responses for this topic tells us that further curriculum work is needed to sharpen the focus of this concept.

In general, the more concetually-based topics had less recognition than the more fact-oriented topics. For example, the discussions of jobs available in data processing were recalled more readily than the importance of "survival" skills, such as writing.

4. Problems and Recommendations

The questionnaire data have helped to further tailor the curriculum to student needs. However, to obtain an overview of the success of the TAR sequence, it remains necessary to investigate student response in greater depth.

It is interesting to note that the Association for Computing Machinery (the largest professional association in the field), has just published a set of guidelines for community college computer program curricula. The Association now recommends that students receive, in addition to the technical course material, the following topics: an awareness of the "programmer environment," including the "organizational, social and psychological and economic matters;" and the integration of communication skills. In particular, the group specifies:

> The graduate of the program (Associate Degree), in addition to being skilled technically as a computer programmer, must be able to use communications skills and related talents to work in an organization responsibly, effectively and productively.

It seems clear that the direction the D.P. staff have chosen is one which is now being recommended to other institutions.

5. Data Upon Which Analysis is Based

a. Summary by Topic

TAR STUDENTS (N = 32)

	QUESTION #1 WAS IT TAUGHT?		QUESTION #2 HOW MUCH TIME WAS SPENT ON IT?		QUESTION #3 WAS IT USEFUL?	
	INTRODUCTION	COOP PREP	INTRODUCTION	COOP PREP	INTRODUCTION	COOP PREP
JOBS AVAILABLE IN DATA PROCESSING	100% (78%*)	100%	60%	90%	90%	90%
RESPONSIBILITIES IN DATA PROCESSING	70% (59%*)	100%	60%	81%	70%	100%
TRAINING REQUIRED	90% (54%*)	100%	80%	80%	70%	100%
MATH, ACCOUNTING, WRITING SKILLS	40% (44%*)	72%	0%	50%	20%	63%
HOW ORGANIZATIONS USE DATA PROCESSING	80% (71%*)	80%	50%	70%	60%	60%
PRESSURE ON WORKERS	60% (48%*)	100%	30%	90%	70%	81%
DIFFERENT VALUES TOWARD WORK	N.A.	80%	N.A.	60%	N.A.	49%

*NON-TAR

b. Coop Prep (N = 29)

ALL STUDENTS

	QUESTION #1 WAS TOPIC TAUGHT?	QUESTION #2 WAS ADEQUATE TIME SPENT ON IT?	QUESTION #3 TOPIC PERCEIVED AS EXTREMELY OR VERY USEFUL
JOBS AVAILABLE IN DATA PROCESSING	100%	93%	94%
ANALYZING PAST WORK EXPERIENCE	85%	72%	65%
RESPONSIBILITIES IN DATA PROCESSING	93%	81%	87%
TRAINING & EXPERIENCE REQUIRED IN DATA PROCESSING	90%	73%	82%
DIFFERENT VALUES TOWARD WORK	80%	60%	49%
MATH, ACCOUNTING, WRITING SKILLS	70%	42%	48%
HOW ORGANIZATIONS USE DATA PROCESSING	78%	62%	70%
POLICIES OF COOPERATIVE EDUCATION	88%	84%	75%
UNDERSTANDING EMPLOYER CONCERNS	97%	74%	70%
PRESSURES AND DEMANDS OF DATA PROCESSING	94%	87%	81%
EXPERIENCES AVAILABLE THROUGH COOPERATIVE EDUCATION	93%	77%	79%
INTERVIEWING TECHNIQUES	97%	94%	97%
PROBLEMS THAT MIGHT OCCUR	97%	84%	90%

6. DATA PROCESSING QUESTIONNAIRE: PART I

INSTRUCTIONS: The following topics are often discussed in the FIRST INTERNSHIP SEMINAR. We would like your reaction to the usefulness of including each of these topics in such a course. For each topic listed below, we would appreciate your answering the 3 indicated questions by checking ( ) the appropriate boxes.

NOTE: If the answer to Question 1 is YES, please answer Questions 2 and 3.
If the answer to Question 1 is NO, please answer Question 3.

Thank you very much.

	QUESTION 1 Was the topic discussed in the course?		QUESTION 2 Compared to the time spent on other course topics, how much was devoted to this topic?				QUESTION 3 Regardless whether this topic was taught, is this topic useful to you?			
TOPIC	YES	NO	ALOT	AN AVERAGE AMOUNT	VERY LITTLE	NO TIME AT ALL	EXTREMELY USEFUL	VERY USEFUL	SOMEWHAT USEFUL	NOT USEFUL AT ALL
A. Jobs available in D.P.										
B. Understanding some of the typical problems that might occur in a work situation.										
C. Responsibilities of different positions in D.P.										
D. Training and experience required for each position in D.P.										
E. How Math., Accounting, and Writing Skills are used in D.P.										
F. How large organizations use Data Processing.										
G. Understanding the concerns of the employer in the business world.										
H. The pressures and demands on workers in D.P.										

DATA PROCESSING QUESTIONNAIRE: PART II

The questions below ask your opinion about how well each course helps you understand the concepts of the other courses in the sequence. Please answer the questions as carefully as possible by checking one choice.

1. Looking at your internship experience during the whole quarter, did you find it:

   (a) Extremely satisfying _____
   (b) Very satisfying _____
   (c) Somewhat satisfying _____
   (d) Not satisfying _____

   Why do you feel this way?_____

   _____

2. Disregarding your specific job tasks on the internship, did the seminar and the seminar assignments help you understand the topics listed in Part I of the questionnaire?

   (a) Extremely helpful _____
   (b) Very helpful _____
   (c) Somewhat helpful _____
   (d) Not helpful at all _____

3. Compare your understanding of the topics listed in Part I before you went on the internship and attended the seminar and after you completed the internship and the seminar. Do you feel you now understand the topics:

   (a) Better than before the internship _____
   (b) The same as before the internship _____
   (c) Less than before the internship _____

4. Do you think INTRODUCTION TO DATA PROCESSING helped you learn more about the world of work and data processing on your internship?

   (a) Extremely helpful _____
   (b) Very helpful _____
   (c) Somewhat helpful _____
   (d) Not helpful at all _____

5. Do you think that COOP PREP helped you learn more about the world of work and data processing on your internship?

   (a) Extremely helpful _____
   (b) Very helpful _____
   (c) Somewhat helpful _____
   (d) Not helpful at all _____

DATA PROCESSING QUESTIONNAIRE: PART II

6. Do you think that the seminar and the seminar assignments helped you to understand the world of work and data processing?

(a) Extremely helpful _____
(b) Very helpful _____
(c) Somewhat helpful _____
(d) Not helpful at all _____

7. Do you think that the seminar helped you to understand better what was taught during INTRODUCTION TO DATA PROCESSING and COOP PREP?

(a) Extremely helpful _____
(b) Very helpful _____
(c) Somewhat helpful _____
(d) Not helpful at all _____

8. In what ways did the internship and seminar help you to understand the concepts taught in INTRODUCTION TO DATA PROCESSING and COOP PREP?

_____

_____

_____

9. How did the concepts taught in INTRODUCTION TO DATA PROCESSING and COOP PREP help you to get more from your internship?

_____

_____

_____

NAME: _____

DATA PROCESSING QUESTIONNAIRE

DATE: _____

INSTRUCTIONS: The following topics are often discussed in the INTRODUCTION TO DATA PROCESSING COURSE. We would like your reation to the usefulness of including each of these topics in such a course. For each topic listed below, we would appreciate your answering the 3 indicated questions by checking ( ) the appropriate boxes.

Thank you very much.

NOTE: If the answer to Question 1 is YES, please answer Question 2 & 3.

If the answer to Question 1 is NO, please answer Question 3.

	QUESTION 1		QUESTION 2				QUESTION 3			
	Was the topic discussed in the course?		Compared to the time spent on other course topics, how much was devoted to this topic?				Regardless whether this topic was taught, is this topic useful to you?			
TOPIC	YES	NO	ALOT	AN AVERAGE AMOUNT	VERY LITTLE	NO TIME AT ALL	EXTREMELY USEFUL	VERY USEFUL	SOMEWHAT USEFUL	NOT USEFUL AT ALL
A. Jobs available in D.P.										
B. How computers work.										
C. Responsibilities of different positions in D.P.										
D. How to write simple programs.										
E. How Math, Accounting and Writing Skills are used in D.P.										
F. How large organizations use Data Processing.										
G. How computer equipment is operated.										
H. How number systems (i.e., binary)work.										
I. The pressures and demands on workers in D.P.										
J. The types of experiences available through the cooperative education program.										
K. How data is organized on forms and in files.										
L. Training and experience required for each position in D.P.										

E. The Adaptation of the TAR Model to Adult Students: Freedom - Its Relationship to Work and Leisure

1. Introduction

Freedom: Its Relationship to Work and Leisure was pilot tested during the Spring academic quarter in the Extended Day Division. The course carried six credits, three of which were granted by the Division of Cooperative Education. There were 15 additional class contact hours. Students were expected to complete both "work" and "leisure" logs, applying the concept of freedom to each.

The course was an experiment in applying the TAR (Teaching, Application and Reinforcement) model, normally a two quarter sequence, to a one quarter course. The TAR-red course, Freedom and Life Experience, had been successfully taught to full-time day students. The Application and Reinforcement phases of the model occurred as students applied the concept of freedom to their internships and reinforced their experiences in their concurrent internship seminars. It was thought that the modified course would provide a new TAR model that would include a combined academic and cooperative education experience for part-time evening students.

Students were asked to rate the degree to which they thought the concept of freedom was applicable to work and leisure. They were also asked to evaluate the extent to which they clarified their thoughts on freedom, work and leisure as a result of the course experience, and to determine the usefulness of the logs in applying these concepts. They considered the length of the course and whether they would recommend it to a friend.

2. Findings

The course did not achieve many of its anticipated outcomes. This was attributed to the fact that all the TAR-red philosophy materials could not be introduced in the one-quarter time span. The nature of the material was such that the "application" and "reinforcement" could not occur until almost all of the conceptual material was learned. Originally, the additional course contact hours were thought to provide sufficient time for application and reinforcement. For the experimental philosophy course, this proved not to be the case.

a. Agreement on Course Objectives

Of the respondents, 63.7% felt that the application of freedom to work was valuable, while 77.3% felt its application to leisure was valuable. It is possible that a greater number of students view leisure as "free time" and more readily see its relationship to freedom than the relationship to work to freedom.

b. Course Length

Two questions were asked regarding time allotments for the course. The first referred to overall length of the course. Fifty-nine percent of the students thought it was too short, 27.3% thought the length was "just right" and 13.9% felt it was too long. A second question was asked regarding the amount of time spent on the application of the concept of freedom to work and leisure. An overwhelming majority (85.7%) thought an insufficient amount of time was alloted to application while 14.3% felt the time spent was "just right." Suggestions were made to increase the amount of time spent on application ranging from an additional two weeks to expanding the course to two quarters.

c. Achievement of Course Objectives

When asked if they had more clearly defined their thoughts on the nature of freedom, 54.6% strongly agreed. Fifty percent of the class felt that course helped them to clarify their thoughts about the nature of work. Only 36.4% felt it was helpful in clarifying the nature of leisure. These percentages relate to the amount of class time spent on each area. The major portion of the quarter was devoted to exploring the nature of freedom. The instructor felt that it was absolutely essential that students have an understanding of the concept of freedom before applying it to work and leisure. Consequently, a small segment of the quarter was spent on actually applying the concept of freedom to daily activities. The use of the logs, to assist students in organizing and analyzing their daily activities, was delayed until the end of the quarter. As expected, students gave fairly low ratings with regard to their usefulness: 40.9% rated the logs as useful in applying the concept of freedom to work and 54.6% in application to leisure.

d. Course Value to Other Students

Given the lack of sufficient time to adequately cover the course material, it is not surprising that only 45.4% of the class would recommend the course to other students. Of the 27.3% who would not recommend it, many annotated their ratings with comments such as, "I would not recommend it as a one quarter course."

3. Conclusions.

Because of the nature of its content and its structure, "Freedom: Its Relationship to Work and Leisure," is not a suitable model for a TAR-red one quarter course. Rather than redesign the course to fit the one quarter model, it will be expanded to two academic quarters. The first will be devoted to a self-contained unit entitled, "Freedom." It will be a prerequisite for a second-quarter elective course that will explore the relationship of freedom to work and leisure, using the logs as a vehicle to analyze daily experiences.

The College will continue to experiement with the one quarter modified TAR model. Based on the experience gained from the pilot testing of the Philosophy TAR model, a refined criteria for course selection has been developed. Future courses must contain material that can be organized into smaller self-contained units. The presentation of the content must be such that it can be immediately applied and reinforced before progressing to the next unit. Consequently, the pilot testing of a modified TAR-red course, while not in itself successful, provided useful data for the experimentation with other courses.

4. Data (N = 32)

a. Agreement on Course Objectives

	AGREE	NEUTRAL	DISAGREE
THE APPLICATION OF THE CONCEPT OF FREEDOM TO WORK IS VALUABLE	63.7%	22.7%	13.6%
THE APPLICATION OF THE CONCEPT OF FREEDOM TO LEISURE IS VALUABLE	77.3%	18.2%	4.5%

b. Course Length

	TOO SHORT	JUST RIGHT	TOO LONG
THE LENGTH OF THE COURSE WAS:	59.0%	27.3%	13.7%
THE AMOUNT OF TIME ALLOTED TO THE APPLICATION OF THE CONCEPT OF FREEDOM TO THW WORK/LEISURE EXPERIENCE WAS:	85.7%	14.3%	0%

c. Achievement of Course Objectives

	AGREE	NEUTRAL	DISAGREE
I HAVE MORE CLEARLY DEFINED MY THOUGHTS ON THE NATURE OF FREEDOM	54.6%	36.4%	9.0%
I HAVE MORE CLEARLY DEFINDED MY THOUGHTS ON THE NATURE OF WORK.	50.0%	27.3%	22.7%
I HAVE MORE CLEARLY DEFINED MY THOUGHTS ON THE NATURE OF LEISURE.	36.4%	45.5%	18.1%

d. The Logs Were Useful in Applying the Concept of Freedom to:

	AGREE	NEUTRAL	DISAGREE
WORK EXPERIENCE	40.9%	27.3%	31.8%
LEISURE EXPERIENCE	54.6%	18.2%	27.2%

3. Course Value to Other Students

	AGREE	NEUTRAL	DISAGREE
I WOULD RECOMMEND THIS COURSE TO A FRIEND.	45.4%	18.2%	36.4%

5. Questionnaire

FREEDOM: ITS RELATIONSHIP TO WORK AND LEISURE

Spring - 1977

(Optional) Name _____

Please circle the response that best describes your thoughts on the following statements. Your answers will help in the future.

1. I have more clearly defined my thoughts on the nature of freedom since enrolling in this course.

   Strongly Agree 1 2 3 4 5 Strongly Disagree

---

2. I have more clearly defined my thoughts on the nature of work since enrolling in this course.

   Strongly Agree 1 2 3 4 5 Strongly Disagree

---

3. I have more clearly defined my thoughts on the nature of leisure since enrolling in this course.

   Strongly Agree 1 2 3 4 5 Strongly Disagree

---

4. The application of the concept of freedom to work is valuable.

   Strongly Agree 1 2 3 4 5 Strongly Disagree

---

5. The application of the concept of freedom to leisure is valuable.

   Strongly Agree 1 2 3 4 5 Strongly Disagree

---

6. The logs were useful in applying the concept of freedom to my work experience.

   Strongly Agree 1 2 3 4 5 Strongly Disagree

---

7. The logs were useful in applying the concept of freedom to my leisure experience.

   Strongly Agree 1 2 3 4 5 Strongly Disagree

---

8. Another method (besides the logs) to systematically think about my work/ leisure experience would be:

LaGuardia Community College
Student Survey
Freedom/Work/Leisure
Spring/77

9. The **amount** of time alloted to the application of the concept of freedom to the work/leisure experience was:

not enough * just right too much *

*If "not enough" or "too much" -- how much time should be alloted to application?

---

10. The length of the course was:

too short * just right too long *

*If "too short" or "too long" -- how long should course be?

---

11. I would recommend this course to a friend:

Strongly Agree 1 2 3 4 5 Strongly Disagree

(Please answer the following on the back of this page.)

12. The most useful part of the course was:

13. The least useful part of the course was:

14. The part of the course I would change is:

Thank you!

F. The "Pairing" of Courses to Infuse and Reinforce Career Education Objectives

1. Introduction

The combining of a required Liberal Arts course, Introduction to Social Science (ISS), and the required Freshmen Advisory Hour was pilot tested during the Spring, 1977 academic quarter. The two courses sought to relate social science concepts and skills to students; career exploration, including self-evaluation, preliminary career decision making and college course programming.

Students were asked to rate the "pairing course" in several areas: agreement with course objectives, achievement of course objectives and value to other students.

2. Findings

The evaluation results show a marked discrepancy between student agreement with course objectives, and achievement of these objectives. While students gave a low rating to the importance of combining the courses and did not often see the conceptual relationship between the two, a large majority stated that they achieved specifically stated outcome objectives.

a. Course Objectives

When asked if they thought it important to combine Introduction to Social Science and the Advisory Hours, 58.1% of the students agreed. Yet only 41.0% saw a relationship between topics discussed in ISS and in the Advisory Hours. Within the class, 50.1% said the ISS topics were presented in a more personal way in the Advisory Hours; 59.1% thought the Advisory Hours helped them to see the relationship of social science concepts to their everyday life.

b. Achievement of Course Objectives

Ratings were far more positive for achivement of course objectives. The paired course was rated by 86.4% of the students as helping them to think more about planning their futures. Futhermore, 81.8% considered the research and problem solving skills they learned in the course as being helpful in their future planning, both at LaGuardia and after graduation.

The availability of a counselor was also positively rated by students; 81.8% felt they had more opportunity to talk with their counselor because she attended

class sessions.

The only outcome objective receiving a lower rating concerned study skills. This may be related to the amount of time devoted to it within the course. There was an effort to emphasize study skills through the use of course materials in only a few class sessions. However, 61.1% of the students rated it as helpful.

c. Value of Course to Others

The course was recommended by 77.3% of the class. Nine percent felt they would not recommend it, while the remaining 13.6% gave a neutral response.

3. Conclusions

The pairing of Introduction to Social Science and the Freshmen Career Advisory Hours has achieved many of its original objectives. However, the two courses need to be strengthened thrmatically, to enable students to more clearly perceive the relationship between Social Science concepts and Advisory Hour activities. The paired course is presently being modified to more clearly demonstrate these conceptual linkages. Study skills will also be given greater emphasis through a more systematic attempt to relate specific skills to course content. It should be noted that team teaching the two courses requires considerable planning time. Sequencing topics through ongoing curricular articulation and faculty visits to each other's classes takes more time than some college budgets will permit. But where the pairing is feasible, it appears to be a promising curriculum development.

4. Data on Paired Course: Introduction to Social Science and Career Advisory Hours (N=22)

a. Agreement on Course Objectives

	AGREE	NEUTRAL	DISAGREE
IT IS IMPORTANT TO COMBINE INTRODUCTION TO SOCIAL SCIENCE WITH FRESHMEN CAREER ADVISORY HOURS.	68.1%	13.7%	18.2%
TOPIC PRESENTED IN ISS WERE ALSO DISCUSSED IN A MORE PERSONAL WAY IN ADVISORY HOURS.	50.1%	22.7%	27.2%
THERE IS A DEFINITE RELATIONSHIP BETWEEN THE TOPICS DISCUSSED IN ISS AND IN ADVISORY HOURS.	41.0%	18.2%	40.8%
ATTENDING ADVISORY HOUR SESSIONS HAS HELPED ME TO SEE THE RELATIONSHIP OF SOCIAL SCIENCE CONCEPTS TO MY EVERY DAY LIFE.	59.1%	22.7%	18.2%

b. Achievement of Course Objectives

	AGREE	NEUTRAL	DISAGREE
ISS AND ADVISORY HOURS HAVE HELPED ME TO THINK ABOUT PLANNING MY FUTURE.	86.4%	4.5%	9.1%
THROUGH ISS AND ADVISORY HOURS I LEARNED RESEARCH AND PROBLEM SOLVING SKILLS TO HELP ME PLAN MY FUTURE BOTH AT LAGUARDIA AND AFTER GRADUATION.	81.8%	9.1%	9.1%
I HAD MORE OPPORTUNITY TO TALK TO MY COUNSELOR, BECAUSE SHE ATTENDED ISS.	81.8%	13.7%	4.5%
ATTENDING ISS AND ADVISORY HOURS HAS HELPED ME WITH STUDY SKILLS.	61.9%	28.6%	9.5%

c. Course Value to Other Students

	AGREE	NEUTRAL	DISAGREE
I WOULD RECOMMEND THIS COURSE TO A FRIEND.	77.3%	13.7%	4.5%

G. A Study of Employer's Attitudes Toward LaGuardia's Cooperative Education Internship Program

1. Introduction

As part of a study entitled, "The Impact of a Community College Cooperative Education Program on the Performance of Its Graduates,"* employers were queried on their attitudes toward LaGuardia's internship program and the performance of its students. The pool of approximately 300 employers who hire LaGuardia interns was winnowed to a list of 51 whose experience as C.E. employers appeared to be broad enough to enable them to make representative, balanced and comparative judgements about interns as a class of employees. This list was further narrowed down by imposing the following criteria: (1) the employer had to have participated in the program for at least four academic quarters; (2) at least four interns must have been placed with the agency or company; and (3) there needed to be continuity of supervision or administration so that the participant's representative in the study had an adequate perspective of his company's role in C.E. over a period of time.

Twenty-nine separate companies and agencies met these criteria and agreed to be interviewed. Five of these organizations were represented by two or more departments or divisions whose operations were so independent that, for the purposes of the study, they were considered as separate employers. Thus a total of thirty-four employers participated.

Personal appointments were made with a representative of each participating employer, who was visited by a trained interviewer. The questionnaire itself contained a series of 19 questions put in statement form pertaining to the employer's attitudes about cooperative education and the agency's participation in the program. The respondent was then asked to identify groups of individuals with whom (in addition to LaGuardia interns) he or she was sufficiently acquainted as employees to provide judgement about their performance as a group. The groups were:

*Dan J. Erlich and Harry N. Heinemann, "The Impact of a Community College Cooperative Education Program on the Performance of Its Graduates," Research Grant No. G007500917, Department of Health, Education & Welfare, Office of Education, Cooperative Education Branch, March, 1977.

1. Young employees in entry-level, full-time, permanent, post-training positions, no Coop background.

2. Young employees in career training positions, no Coop background.

3. LaGuardia graduates, formerly interns in the agency, in entry-level, full-time, post-training positions.

4. LaGuardia graduates, not formerly interns in the agency, also in entry-level, full-time, post-training positions.

The respondent was then asked to complete a rating form which listed a number of attributes, first for LaGuardia interns, and then also for each comparison group identified on the list just referred to.

2. Findings

Of the 19 statements concerning Coop agreement with positions supportive of the program occurred in 16 cases. The strongest approval came in statements dealing with support for Coop by top management, desire to continue as a participating employer, the value of Coop for public-relations purposes, and the value of the interns to the company's work force; in these instances no disagreements were encountered. The great majority of the organizations representatives did not concur with criticisms often leveled at Coop, namely that continual turnover of internships, and that such programs are too costly in terms of financial outlay and personnel time. However, respondents were about evenly divided on the question of whether training interns is less costly than training regular employees.

An analysis of the 34 returns showed that 79 percent of all opinions on these items were positive. Financial organizations appear to have held somewhat less positive attitudes than other types of employers, and there was a tendency for larger agencies to be more supportive than smaller ones.

Employers were asked to rate several personnel groups on a series of work-related attributes. These included characteristics commonly included on employee rating scales and often cited as the most valid indices of performance standards. In addition to twelve "pure" attributes (cooperativeness, initiative, appearance, maturity, etc.), there were three integrative scales dealing with overall assess-

ments of employees in the areas of (1) attitudes and motivations; (2) skills and abilities; and (3) performance in general. Since all of the rating scales were anchored in a f-point rating system (excellent, good, fair, poor), it was possible to construct a rating index (similar to a grade-point average) for the responses on each attribute, based on the equivalence formula: excellent=1, good=2, fair=3, poor=4. A mean rating index for the twelve attributes was also computed.

As the data reveal, LaGuardia graduates who had formerly served as interns with their current employers achieved the highest rathings (i.e., the lowest scores) on each of the twelve pure attributes, the three integrative scales, and the mean rating scale. (The mean rating for this group, 1.56, was significantly lower than each of the other mean ratings at a level of significance exceeding $p < .02$, as judged by t-tests.) Next in overall order were LaGuardia interns (mean rating index of 1.83), followed closely by non-Coop personnel in career training positions (1.89) and, lastly, entry-level, post-training personnel not affilicated with a cooperative education program (2.12). (The mean rating index for interns differed from the non-Coop entry-level group at a significance level of $p < .05$.) The tendency for the twelve pure attributes to receive similarly-ranked ratings in each of the four groups is quite marked; cooperativeness, compliance, and willingness to learn are highest-ranked in each case, while knowledge of job is the is the lowest-ranked attribute in all instances. LaGuardia interns were awarded the best ratings by manufacturing and education-related organizations, while legal and finance agencies were somewhat less positive.

A matrix of correlation coefficients for the major variables of the employer study is presented below. There are two noteworthy findings here: (1) size of agency is significantly related to ratings of non-Coop career employees (but not to ratings of LaGuardia interns) -- i.e., the larger the organization, the better they rate these individuals; and (2) while ratings of LaGuardia graduates are highly correlated with ratings of LaGuardia interns, attitudes of employers toward LaGuardia interns are negatively correlated with ratings of non-Coop workers in

training (i.e., high ratings of the one are associated with low ratings of the other). The data indicate that the various scales associated with ratings of LaGuardia interns generally intercorrelate positively and significantly. Nevertheless, many of the scale-pairs (those for which correlation coefficients are reported in Roman type face) appear to be independent of one another (e.g., appearance, and cooperativeness).

4. Data

a. Attitudes of Management Towards Cooperative Education (CE)

STATEMENT (PARAPHRASED)	N	AGREE	DISAGREE	NO OPINION
TOP MANAGMENT SUPPORTS CE	32	90.6%	0.0%	9.4%
PARTICIPATE IN CE TO INCREASE SIZE OF MANPOWER RESOURCES	32	62.5%	21.9%	15.6%
PLAN TO CONTINUE PARTICIPATING IN CE FOR NEXT FEW YEARS	33	90.9%	0.0%	9.1%
PARTICIPATING IN CE IS GOOD PUBLIC RELATIONS	33	81.8%	0.0%	18.2%
TURN-OVER OF INTERNS CREATES A PROBLEM IN WORK CONTINUITY	33	27.3%	58.8%	12.1%
CE INTERNS ARE AN ASSET TO COMPANY WORK FORCE	33	90.9%	0.0%	12.1%
CE GRADS ARE MORE SKILLED IN THEIR (CAREER) WORK AREA THAN NON-CE GRADS	31	45.2%	12.9%	41.9%
THROUGH PARTICIPATION IN CE., EMPLOYER PLAYS IMPORTANT ROLE IN HIGHER EDUCATION	33	63.6%	12.1%	24.2%
PARTICIPATION IN CE IS TOO COSTLY IN FINANCIAL OUTLAY OR PERSONNEL TIME	33	3.0%	87.9%	9.1%
SUPERVISION OF INTERNS IS VALUABLE EXPERIENCE FOR EMPLOYEES	33	54.5%	21.2%	24.2%
PARTICIPATION IN CE HAS HELPED US EXPAND	33	33.3%	45.5%	21.2%
INTERNS DEVELOP MORE MATURE WORK ATTITUDES THAN NON-CE PEERS	33	57.6%	18.2%	24.2%
PARTICIPATION IN CE REDUCES COSTS OF MAINTAINING LARGE PERSONNEL FORCE	33	39.4%	45.5%	15.2%
EXPECT CE GRADS TO MOVE UP CAREER LADDER MORE RAPIDLY	33	51.5%	21.2%	27.3%

a. Attitudes of Management Towards Cooperative Education (CE) (Cont.)

STATEMENT (PARAPHRASED)	N	AGREE	DISAGREE	NO OPINION
TRAINING INTERNS IS LESS COSTLY THAN TRAINING REGULAR EMPLOYEES	33	39.4%	42.4%	18.2%
WE HIRE GRADS AS FULL-TIME EMPLOYEES WHEN POSITIONS BECOME AVAILABLE	33	72.7%	6.1%	21.2%
INTERNS UNDERSTAND AND ACCEPT STANDARD WORK RULES	33	87.9%	9.1%	3.0%
PARTICIPATION IN CE PROVIDES GREATER FLEXIBILITY IN REGULAR PERSONNEL ALLOCATION	32	68.8%	12.5%	18.8%
PARTICIPATION IN CE PROVIDES LARGER RANGE OF SKILLS AMONG EMPLOYEES	33	54.5%	27.3%	18.2%

b. Management Attitudes: Summary of Positive Responses to Statements about Cooperative Education[a]

PERCENT POSITIVE RESPONSES[b]	N	PERCENT
91 - 100	8	24.2%
81 - 90	8	24.2%
71 - 80	8	24.2%
61 - 70	5	15.2%
51 - 60	3	9.1%
41 - 50	1	3.0%
TOTAL	33	
MISSING	1	2.9
MEAN	78.9	

[a] For this analysis, responses of "No Opinion" were excluded. Thus, 90 percent positive responses means 90 percent of the total of "Agree" and "Disagree" statements.

[b] For computational purposes, responses of "Disagree" to statements 5 and 9, which were stated in the negative, have been indexed as positive.

c. Attitudes of Management Towards Cooperative Education: Effects of Company Type, Size, and Longevity as CE Participant

	Sample	Percent Positive Responses					
		75-100		50-74		0-49	
	N	N	Pct.	N	Pct.	N	Pct.
A. Company type							
Manufacturing	9	6	66.7	3	33.3	0	0.0
Education & related orgs.	8	6	75.0	1	12.5	1	12.5
Finance	6	1	16.7	5	83.3	0	0.0
Legal	4	3	75.0	1	25.0	0	0.0
Research & related orgs.	3	2	66.7	1	33.3	0	0.0
Retailing	2	2	100.0	0	0.0	0	0.0
Health	1	0	0.0	1	100.0	0	0.0
Total	33	20		12		1	
Missing	1						
B. Total number of employees							
1-250	9	6	66.7	2	22.2	1	11.1
251-500	7	4	57.1	3	42.9	0	0.0
501-1000	3	2	66.7	1	33.9	0	0.0
Over 1000	6	5	83.3	1	16.7	0	0.0
Total	25	17		7		1	
Missing	9						
C. Number of quarters as CE employer							
1-5	4	2	50.0	2	50.0	0	0.0
6-10	16	12	75.0	3	18.8	1	6.3
Over 10	13	6	46.2	7	53.8	0	0.0
Total	33	20		12		1	
Missing	1						

d. Employers' Ratings of Employees: Rating Indexes for Various Groups[a]

Attribute	Criterion Group[b] LaGuardia Interns	Non-Coop Entry Level	Non-Coop Training	LaG.Grads Former Interns
Cooperativeness	1.33	1.77	1.71	1.23
Compliance	1.60	1.96	1.79	1.50
Quality of work	1.87	2.28	2.00	1.62
Quantity of work	1.87	2.32	1.93	1.57
Willingness to learn	1.47	1.86	1.57	1.41
Initiative	2.00	2.09	1.93	1.59
Knowledge of job	2.10	2.36	2.29	1.73
Acceptance of responsibility	2.03	2.28	1.86	1.73
Interpersonal communication	2.03	2.00	1.86	1.59
Personal maturity	2.13	2.27	2.21	1.59
Personal appearance	1.80	2.05	1.93	1.59
Attendance and punctuality	1.67	2.00	2.14	1.59
Overall attitudes and motivation	1.73	2.14	1.71	1.46
Overall skills and abilities	1.93	2.09	2.00	1.59
Overall performance	1.90	2.14	2.00	1.68
Number of respondents	30	22	14	22
Mean[c]	1.83	2.12	1.89	1.56
Standard deviation	0.31	0.61	0.42	0.33

[a] Indexes based on Excellent=1, Good=2, Fair=3, and Poor=4

[b] A fifth group, LaGuardia graduates who had not been interns, could be rated by only two employers, and has been omitted from this table

[c] Average for the twelve pure attributes (Cooperativeness...Attendance and Punctuality)

e. Performance Ratings of LaGuardia Interns: Effects of Company Type, Size, and CE History

	Sample	Mean Rating 1.0-1.4		1.5-1.9		2.0-2.4	
	N	N	Pct.	N	Pct.	N	Pct.
A. Company type							
Manufacturing	9	0	0.0	6	66.7	3	33.3
Education & related orgs.	6	2	33.3	3	16.7	1	16.7
Finance	6	0	0.0	3	50.0	3	50.0
Legal	4	0	0.0	1	25.0	3	75.0
Research & related orgs.	3	1	33.3	2	66.7	0	0.0
Retailing	2	0	0.0	2	100.0	0	0.0
Health	0	0	0.0	0	0.0	0	0.0
Total	30	3		17		10	
Missing	4						
B. Total number of employees							
1-250	8	2	25.0	5	62.5	1	12.5
251-500	7	0	0.0	4	57.1	3	42.9
501-1000	3	0	0.0	2	66.7	1	33.3
Over 1000	6	1	16.7	3	50.0	2	33.3
Total	24	3		14		7	
Missing	10						
C. Number of quarters as CE employer							
1-5	3	1	33.3	0	0.0	2	66.7
6-10	14	2	14.3	10	71.4	2	14.3
Over 10	13	0	0.0	7	53.8	6	46.2
Total	30	3		17		10	
Missing	4						
D. Total number of interns							
1-20	12	1	8.3	8	66.7	3	25.0
21-40	13	2	15.4	7	53.8	4	30.8
Over 40	5	0	0.0	2	40.0	3	60.0
Total	30	3		17		10	
Missing	4						
E. Mean number of interns/quarter							
1.0-1.9	15	1	6.7	9	60.0	5	33.3
2.0-2.9	7	2	28.6	3	42.9	2	28.6
3.0-3.9	3	0	0.0	3	100.0	0	0.0
4.0 and higher	7	0	0.0	4	57.1	3	42.9
Total	32	3		19		10	
Missing	2						

f. Correlation Coefficients for Major Variables[a]

Variable	A	B	C	D	E	F	G	H	I	J	K	L
Agency characteristics												
A. Total no. employees	--											
B. No. non-supervisory empl.	*.80*	--										
C. No. active quarters	.25	.37	--									
D. Total no. interns	.16	.19	*.52*	--								
E. Interns per quarter	.03	.07	.12	*.87*	--							
F. Management attitudes	-.16	-.13	.17	.13	.07	--						
LaGuardia Interns ratings												
G. Attitudes/motivation	-.10	-.13	*.42*	.04	-.15	.19	--					
H. Skills/abilities	.04	.23	.26	.07	-.04	*.46*	*.46*	--				
I. Performance	.01	.10	.19	-.15	-.29	*.42*	*.64*	*.77*	--			
J. Mean	.08	.14	.28	.19	.07	*.58*	*.64*	*.77*	*.78*	--		
Other groups, mean ratings												
K. Non-CE, entry	.08	.21	-.02	*.49*	*.56*	-.26	.02	.00	.12	.15	--	
L. Non-CE, career	*.60*	*.60*	-.11	.03	.20	-.31	-.11	-.19	-.19	-.12	*.55*	--
M. LaGuardia graduates	-.12	-.04	.23	-.11	-.31	*.52*	*.62*	*.57*	*.63*	*.68*	-.02	.38

[a]Values for $p<.05$ in italics

g. Ratings of LaGuardia Interns: Correlation Coefficients[a]

Attribute	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
A. Cooperativeness	--														
B. Compliance	*.64*	--													
C. Work quality	*.39*	*.48*	--												
D. Work quantity	.17	.15	*.62*	--											
E. Willingness to learn	*.33*	.07	*.45*	*.46*	--										
F. Initiative	.10	.18	*.46*	*.52*	*.39*	--									
G. Knowledge ability	.18	.18	*.47*	*.36*	.27	*.37*	--								
H. Acc. of responsibility	-.04	-.06	*.40*	*.31*	*.39*	*.56*	*.40*	--							
I. Interpersonal commun.	.19	.14	*.40*	.21	*.39*	.24	*.40*	*.36*	--						
J. Maturity	*.38*	*.43*	*.40*	*.42*	.15	*.39*	*.44*	.21	*.32*	--					
K. Appearance	.00	.20	*.36*	.15	.25	-.10	*.46*	.14	*.49*	.11	--				
L. Attendance/punctuality	*.31*	*.34*	.10	.07	.08	-.09	.16	-.27	.14	*.41*	*.39*	--			
M. *Attitudes/motivation*	*.58*	*.50*	*.54*	.30	*.55*	.25	*.41*	.12	*.51*	*.36*	.29	.14	--		
N. *Skills/abilities*	*.43*	.30	*.66*	*.37*	*.44*	*.33*	*.61*	*.63*	*.51*	*.49*	*.41*	*.33*	*.46*	--	
O. *Performance*	*.45*	*.36*	*.76*	*.45*	*.48*	*.41*	*.59*	*.48*	*.60*	*.48*	*.36*	.13	*.64*	*.77*	--
P. MEAN RATING	*.50*	*.55*	*.79*	*.64*	*.61*	*.59*	*.66*	*.50*	*.60*	*.67*	*.48*	*.35*	*.64*	*.77*	*.78*

[a]Values for p<.05 in italics

H. Comparative Analyses of Cooperative Education Internship Seminars

1. Introduction

Three internship seminars are provided to Coop students while on their internships. The first seminar, corresponding to the first internship is, Work Values and Job Satisfaction. The second, corresponding to the second internship is, The Reality of Your Career Choice. The third, corresponding to the final internship, is Independent Research: The Application of Course Work to Reality. All students, Career and Liberal Arts majors alike, are required to take these seminars. Seminars are taught by LaGuardia instructors and counselors, as well as specially recruited and oriented representatives of industry; the latter serve in this role as adjunct professors to the college.

This study was concerned with the extent to which: (a) Liberal Arts majors perceived these career educational seminars as valuable, compared to Career majors; and (2) the extent to which industrial representatives could effectively teach the seminars, as compared to college professionals.

At the concluding session of each seminar provided throughout the 76-77 academic year (i.e., four quarters at LaGuardia), the students of each section were asked to anonymously complete evaluative questionnaires with respect to the value of their respective seminars in attaining their intended career educational objectives. 773 students (180 Liberal Arts majors and 593 Career majors) took part in this survey. Each seminar was rated on a 4-point scale (Extremely, Very, Somewhat, Not) with respect to its effectiveness in effectively delivering its objectives.

2. Findings

Table I (appearing on Page 62) reveals the configurations of student ratings of the three types of seminars, categorized by whether the instructor was a college professional or an industrial representaive. This comparison reveals first that 78% of all students who took seminars during 76-77 rated them as extremely or very helpful in meeting their intended objectives. Further, while overall seminars taught by industrial representatives were perceived as helpful as those taught by

college professionals, the former were perceived as more effective delivering agents with respect to showing students "how their classroom knowledge actually applied to the real world."

Table II (appearing on Page 63) reveals the configuration of student ratings of the three types of seminars, categorized by whether the students were Liberal Arts or Career majors. This comparison reveals that Liberal Arts and Career majors tended to perceive their seminars similarly with respect to effectivenss, with a slight tendency for career majors to perceive "how their classroom knowledge actually applied to reality" (objective of third seminar) more so than Liberal Arts majors.

3. Conclusions

a. Approximately 78% of the students rated the seminars as either "extremely" or "very" helpful in meeting their intended career educational objectives.

b. Liberal Arts majors regarded the seminars as equally valuable to them as did the Career majors.

c. Seminars taught by industrial representatives were rated equally effective to those taught by LaGuardia's professional staff, and more so with respect to showing students "how their course work actually applied to the real world."

4. Data

TABLE I

ANONYMOUS EVALUATIONS OF INTERNSHIP SEMINARS BY STUDENTS DURING 76-77, CATEGORIZED BY WHICH SEMINAR TAKEN AND TYPE OF INSTRUCTOR

	TAUGHT BY INDUSTRY REPRESENTATIVES				TAUGHT BY LAGUARDIA'S PROFESSIONAL STAFF			
	EXTREMELY	VERY	SOMEWHAT	NOT	EXTREMELY	VERY	SOMEWHAT	NOT
1ST SEMINAR THE RELATIONSHIP BETWEEN WORK VALUES & JOB SATISFACTION								
Q. "How helpful was the seminar in clarifying for you what your most important work needs actually are?"	28 (31%)	34 (38%)	24 (27%)	4 (4%)	74 (35%	108 (51%)	26 (12%)	6 (3%)
2ND SEMINAR THE REALITIES OF YOUR CAREER CHOICE								
Q. "How helpful was the seminar in clarifying your knowledge about future opportunities within your career field?"	46 (39%)	44 (37%)	25 (21%)	4 (3%)	38 (27%)	69 (50%)	23 (17%)	9 (6%)
3RD SEMINAR INDEPENDENT RESEARCH: THE APPLICATION OF COURSEWORK TO REALITY								
Q. "Were you able to see how your classroom knowledge actually applied to the real world?"	25 (33%)	34 (45%)	11 (14%)	6 (8%)	22 (19%)	58 (49%)	27 (23%)	11 (9%)

TABLE II

ANONYMOUS EVALUATIONS OF INTERNSHIP SEMINARS BY STUDENTS DURING 76-77, CATEGORIZED BY WHICH SEMINAR TAKEN AND STUDENT'S MAJOR

	LIBERAL ARTS MAJORS				CAREER MAJORS			
	EXTREMELY	VERY	SOMEWHAT	NOT	EXTREMELY	VERY	SOMEWHAT	NOT
1ST SEMINAR THE RELATIONSHIP BETWEEN WORK VALUES								
Q. "How helpful was the seminar in clarifying for you what your most important work needs actually are?	22 (28%)	42 (53%)	14 (18%)	2 (3%)	77 (35%)	104 (47%)	31 (14%)	7 (3%)
2ND SEMINAR THE REALITIES OF YOUR CAREER CHOICE								
Q. "How helpful was the seminar in clarifying your knowledge about future opportunities within your career choice?"	19 (39%)	19 (39%)	8 (16%)	3 (6%)	72 (33%)	95 (43%)	42 (19%)	12 (5%)
3RD SEMINAR INDEPENDENT RESEARCH: THE APPLICATION OF COURSEWORK TO REALITY								
Q. "Were you able to see how your classroom knowledge actually applied to the real world?"	13 (25%)	22 (43%)	12 (24%)	4 (8%)	37 (25%)	73 (48%)	29 (18%)	14 (9%)

I. Demographic Survey of LaGuardia Students

1. Results

In the 1976-77 academic year, LaGuardia enrolled 4540 students in credit bearing programs. Of this total, 3013 attend full-time and 1527 are enrolled part-time. In addition, 1247 students are enrolled in non-credit programs.

Several characteristics distinguish LaGuardia students from the average community college population. They are generally younger than the national norm, are recent high school graduates and have fairly low secondary school averages. Fifty-eight percent of the 1976 freshmen class were between the ages of sixteen and eighteeen. Another 18 percent were between the ages of nineteen and twenty-one. Almost half of this class reported a high school average below 75 percent, while another quarter of the class had averages below 79 percent.

The population is ethnically mixed: 41 percent of the student body are white, 28 percent black, 24 percent Hispanic, 2 percent Oriental and 5 percent other.

Most of the students' families are "blue collar," with a median income of between $8,000 and $10,000. Parents' education averages high school or less, though they place a high degree of importance on their children's education.

Almost all students receive financial aid. This assistance plus support from parents consitutes students! major source of income while in college.

2. Data

		Number[a]	Percent[b]
1.	Sex		
	Male	445	35
	Female	813	65
2.	Are you a veteran?		
	Yes	50	4
	No	1186	96
3.	Where do you plan to live while attending LaGuardia Community College?		
	At home with parents	908	72
	With relatives or family friends	52	4
	Share apartment with friend	24	2
	My own home or apartment	257	20
	Other	16	1
4.	Ever enrolled at any other college?		
	Yes	106	9
	No	1133	91
5.	Are you a citizen of the U.S.?		
	Yes	1005	81
	No	242	19
6.	In which of the following geographic regions were you born?		
	United States (incl. P.R., C.Z., etc.)	919	73
	North America (other than U.S.)	6	1
	Central America	18	1
	Caribbean	95	8
	South America	107	9
	Africa	2	0
	Europe	64	5
	Near and Middle East	6	1
	Far East	15	1
	Other	20	2
7.	For how many years have you been living in the U.S.? (Including P.R. and dependencies)		
	0 - 5	133	11
	6 - 10	120	10
	11 - 15	65	5
	16 or more	937	75

[a]Based on 1271 survey collected from matriculating freshmen. Items left blank are not counted in these figures.

[b]Rounded to nearest whole percent, and based only on completed items.

		Number	Percent
8.	With which of the following groups do you identify?		
	American Indian	5	0
	White/Caucasian	501	41
	Black/Afro-American	351	28
	Puerto Rican Born Stateside	92	7
	Puerto Rican Born in P.R.	54	4
	Spanish Origin Other than P.R.	148	12
	Oriental	27	2
	Other	59	5
9.	How many brothers and/or sisters do you have?		
	None	85	7
	One	274	22
	Two	319	26
	Three	205	16
	Four	124	10
	Five or more	242	19
10.	What is your age?		
	Under 16	3	0
	16 - 18	723	58
	19 - 21	224	18
	22 - 25	86	7
	26 - 30	94	8
	31 - 40	88	7
	41 - 50	34	3
	51 and over	6	1
11.	Are you the head of your household?		
	Yes	216	17
	No	1029	83
12.	If you are not a head of household, will you be helping to support your family while attending college?		
	No	789	76
	Yes, under $500 per year	144	14
	Yes, $500 - $999 per year	54	5
	Yes, $1000 or more per year	54	5
13.	Marital Status		
	Single	1046	83
	Married	143	11
	Widowed	3	0
	Divorced	30	2
	Separated	32	3
	Other	2	0
14.	Number of children		
	None	989	83
	One	77	7
	Two	66	6
	Three	39	3
	Four or more	21	2

	Number	Percent
15. Have you ever held a full-time job?		
Yes, permanent basis	393	31
Yes, summer only	386	31
No	472	38
16. How long does it take you to get from your residence to college?		
Less than 15 minutes	36	3
Between 15 and 30 minutes	369	29
Between 30 and 45 minutes	354	28
Between 45 and 60 minutes	319	26
Over 1 hour	175	14
17. Have you applied (will you apply) for financial aid from the school?		
Yes	1056	85
No	90	7
Undecided	94	8
18. What will be your main source of financial support during the coming academic year?		
Parent(s)	432	35
Wife or Husband	39	3
Job	220	18
Cooperative Education Internship	51	4
Scholarship or financial aid through school	380	31
Repayable loan	6	1
Previsous personal earnings and savings	15	1
GI Bill, or other governmental assistance (other than scholarship or loan)	44	4
Other	49	4
19. What is your best estimate of your immediate family's total yearly income before taxes?		
Less than $4,000	174	15
$4,000 - 5,999	194	17
$6,000 - $7,999	132	12
$8,000 - $9,999	179	16
$10,000 - $14,999	263	23
$15,000 - $19,999	144	13
$20,000 or more	63	6
20. What were you doing just before entering this college? (Exclude summer activities)		
Attending high school and working	205	16
Attedning high school	437	35
Working (on a full- or part-time job)	347	28
Looking for work	146	12
In the U.S. Armed Services	3	0
Attending another college	16	1
Attending a trade school	10	1
Other	88	7

	Number	Percent
21. What did you enjoy most about your high school experience?		
Courses	598	49
Teachers	94	8
Friends and social life	338	27
Extra-curricular activities (clubs, etc.)	48	4
Sports and athletics	92	8
None of these	64	5
22. What are you most looking forward to in your college experience?		
Courses	1004	81
Teachers	25	2
Friends and social life	102	8
Extra-curricular activities (clubs, etc.)	26	2
Sports and athletics	23	2
None of these	55	5
23. Which of the following was most important in your decision to go to college?		
Did no know what else to do	20	2
Learn a trade or prepare for a professional career	1109	88
Could not find a satisfactory job	57	5
To satisfy parents, etc.	12	1
Other	56	5
24. Primary reasons for selecting LaGuardia		
Location of College	197	18
Grade average too low to gain entrance to first choice school	165	15
Parents urged you to attend	12	1
Curriculum offering at College	297	27
Cooperative Education or work/study program	329	30
High school guidance counselor advised you to attend this College	33	3
Reputation of College	44	4
Friends were going to attend	8	1
25. Secondary reasons for selecting LaGuardia		
Location of College	264	23
Grade average too low to gain entrance to first choice school	61	5
Parents urged you to attend	121	11
Curriculum offering of College	219	19
Cooperative Education or work/study program	254	22
High school guidance counselor advised you to attend this College	74	7
Reputation of College	106	9
Friends were going to attend	31	3

	Number	Percent
26. Primary language spoken at home		
English	765	70
Spanish	229	21
Italian	17	2
Greek	20	2
French	10	1
Slavic	17	2
Oriental	20	2
Semitic	3	0
German	5	1
Other	13	1
27. Student's primary language		
English	843	82
Spanish	132	13
Italian	14	1
Greek	8	1
French	12	1
Slavic	3	0
Oriental	7	1
Semitic	3	0
German	1	0
Other	6	1
28. LaGuardia first choice?		
Yes	727	66
No	345	31
Does not apply	29	3
30. Parents' feeling about major field?		
They strongly approve	705	65
They mildly approve	126	12
They are indifferent	46	4
They disapprove of my choice somewhat	10	1
They strongly disapprove	1	0
They are not aware of my present thinking on this matter	50	5
Does not apply	149	14
30. Most influential in your choice of major		
Father	99	9
Mother	179	17
Other adult acquaintance(s)	269	26
Elementary School teacher(s) or principal	13	1
High school teacher(s)	160	15
High school counselor, dean or principal	79	8
College teacher(s)	9	1
College counselor, dean or other non-teacher	33	3
Close friend(s)	111	11
Have not chosen a major field (curriculum)	96	9

	Number	Percent
31. Primary requirement for job or profession		
Opportunity to use my special talents	318	30
Prospects for a high income	174	16
Freedom to be creative and original	53	5
Opportunity to work with people rather than with things	143	13
Opportunity to be helpful to others and/or useful to society in general	263	25
Stable, secure future	57	6
Getting along with co-workers	16	2
Relative freedom from supervision by others	16	2
Work free of high pressure	23	2
32. Secondary requirement for job or profession		
Opportunity to use my special talents	147	15
Prospects for a high income	247	24
Freedom to be creative and original	70	7
Opportunity to work with people rather than with things	140	14
Opportunity to be helpful to others and/or useful to society in general	163	16
Stable, secure future	98	10
Getting along with co-workers	72	7
Relative freedom from supervision by others	40	4
Work free of high pressure	38	4
33. Importance of education to parents		
Not very important	54	5
Fairly important	178	16
Quite important	311	29
Extremely important	387	35
Does not apply	162	15
34. Mother's education		
Grade school	175	16
Some high (secondary) school	235	22
Finished high school	372	35
Business or trade school	50	5
Some college	49	5
Finished a 2-year college	21	2
Finished a 4-year college	37	3
Attended graduate school	16	2
Do not know	120	11
35. Father's education		
Grade school	165	16
Some high (secondary) school	185	18
Finished high school	312	30
Business or trade school	64	6
Some college	63	6
Finished a 2-year college	22	2
Finished a 4-year college	57	6
Attended graduate school	27	3
Do not know	149	14

	Number	Percent
36. Mother's line of work		
Unskilled worker, laborer	118	12
Semi-skilled worker (machine operator, etc.)	134	13
Service worker (policeman, barber, military)	31	3
Skilled worker or craftsman (carpenter, electrician, plumber, etc.)	19	2
Salesman, bookkeeper, office worker, etc.	134	13
Owner, manager, or executive of a small business	15	2
Owner, manager, or executive of a large business or organization	13	1
Profession requiring a college or advanced degree (teacher, engineer, doctor)	44	4
Homemaker	286	29
Does not apply	205	21
37. Father's line of work		
Unskilled worker, laborer	198	18
Semi-skilled worker (machine operator, etc.)	200	18
Service worker (policeman, barber, military)	144	13
Skilled worker or craftsman (carpenter, electrician, plumber, etc.)	163	15
Salesman, bookkeeper, office worker, etc.	79	7
Owner, manager, or executive of a small business	74	7
Owner, manager, or executive of a large business or organization	31	3
Profession requiring a college or advanced degree (teacher, engineer, doctor)	37	3
Homemaker	4	0
Does not apply	183	16
38. Career in area of curriculum?		
Yes	786	73
No	45	4
Undecided	250	23
39. Future plans		
A life of a service worker (civil service, human services, military, etc.)	145	12
An academic life (teaching, research)	103	9
A business life (sales, bookkeeper, manager)	423	34
A professional life (doctor, lawyer, engineer)	137	11
A life of a trained technician or craftsman	46	4
A life centering upon some aspect of creative art	143	12
Other	53	4
Not sufficient thought to this matter to say	153	13
40. Continue education after graduation from LaGuardia?		
Yes	519	47
No	81	7
Undecided	500	45